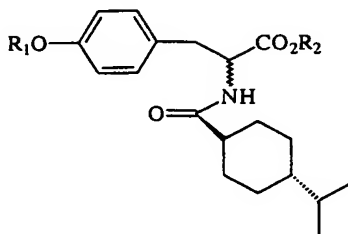


We claim:

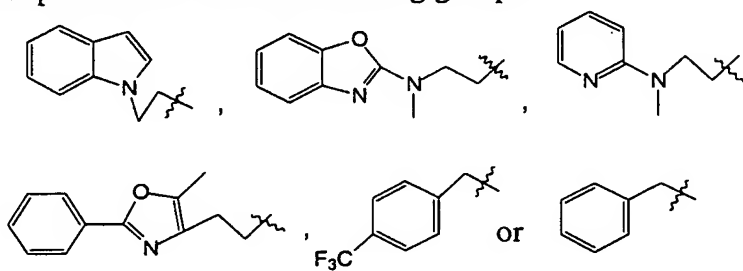
1. An alanine compound of formula (I) or their salts :



(I)

Wherein the configuration of α -carbon atom of alanine is *R* or *S*;

R_1 is hydrogen, substituted or unsubstituted C_{1-6} alkyl, or aryl or aromatic heterocyclic group selected from the following groups:



and R_2 is hydrogen or substituted or unsubstituted C_{1-6} alkyl.

2. An alanine compound or its salt of claim 1 selected from the group consisting of :

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-(5-methyl-2-phenyl-4-oxazolyl)ethoxy]phenyl]propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-[N-methyl-N-(2-benzoxazolyl)amino]ethoxy]phenyl]propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-(5-methyl-2-phenyl-4-oxazolyl)ethoxy]phenyl]propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-[N-methyl-N-(2-benzoxazolyl)amino]ethoxy]phenyl]propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-(1-indolyl)-ethoxy]phenyl]propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-(1-indolyl)-ethoxy]phenyl]propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-(4-trifluoromethylbenzyloxy)phenyl]propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-(4-trifluoromethylbenzyloxy)phenyl]propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-benzyloxy phenyl)

propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-benzyloxyphenyl)

propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-butoxyphenyl)-propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-butoxyphenyl)-propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-ethoxyphenyl)-propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-ethoxyphenyl)-propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-methoxyphenyl)propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-ethoxyphenyl)propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl)propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl)propionic acid;

(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-[N-methyl-N-(2-pyridyl)amino]ethoxyl]phenyl]propionic acid;

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-[4-[2-[N-methyl-N-(2-pyridyl)amino]ethoxyl]phenyl]propionic acid;

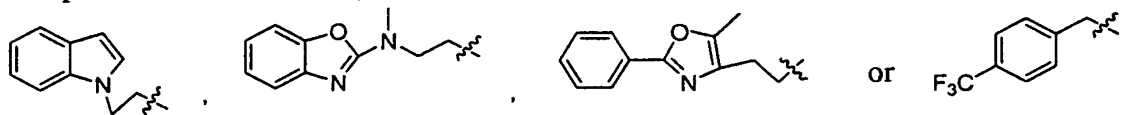
(2*S*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl)propionic acid methyl ester; and

(2*R*)-2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl)propionic acid methyl ester.

3. A method for preparing an alanine compound or its salt of claim 1, said method comprising the following steps:

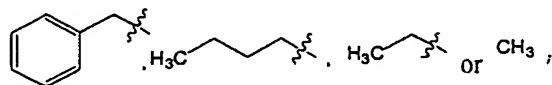
(1) condensing *trans*-4-isopropylcyclohexylcarboxylic acid N-hydroxysuccinimide ester and L-tyrosine methyl ester or D-tyrosine methyl ester conduct in an inert solvent to produce 2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl) propionic acid methyl ester; and

(2) conducting a Mitsunobu reaction with the 2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl) propionic acid methyl ester and a corresponding heterocycloalkyl alcohol or aromatic alcohol, followed by hydrolyzing the reaction product with inorganic base to obtain the compounds of formula (I), wherein R₁ is



and R₂ is hydrogen ;,or

(2) esterifying said 2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl) propionic acid methyl ester with a corresponding alkyl halide under basic condition to obtain the compounds of formula (I), wherein R₁ is



and R₂ is hydrogen ; or

(2) hydrolyzing said 2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)amino]-3-(4-hydroxyphenyl) propionic acid methyl ester to obtain the compound of formula(I), wherein R₁ and R₂ both are hydrogen ; and, optionally

(3) preparing a corresponding pharmaceutical acceptable salt.

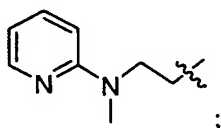
4. The method of claim 3, wherein the inert solvent is selected from chloroform, dichloromethane, ether, and tetrahydrofuran.

5. The method of claim 3, wherein the inorganic base of said hydrolyzing step is selected from sodium hydroxide, lithium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate and lithium carbonate; said hydrolyzing being optionally conducted in the presence of a solvent selected from a mixed solvent of tetrahydrofuran and methanol, a mixture of alcohols solvent, or chloroform, dichloromethane, or benzene.

6. The method of claim 3, wherein said basic condition includes the addition of an inorganic base selected from sodium hydroxide, lithium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate and lithium carbonate; temperature of etherification is between -10-180 °C; The suitable solvent is selected from N,N-dimethylformamide, DMSO and H₂O; the reaction time is 1-72h.

7. A method of preparing a compound of claim 1, comprising the following steps:

(1) condensing 2-[N-(*trans*-4-isopropylcyclohexylcarbonyl)]-3-(4-hydroxyphenyl)propionic acid methyl ester with an amino-protected 2-methylaminoethanol to form a protected product, deprotecting said protected product, and refluxing with excessive 2-fluoropyridine, and hydrolyzing with a base to obtain a compound of formula (I), wherein R₁ is



and R₂ is hydrogen; and optionally
(2) preparing a pharmaceutical acceptable of said compound.

8. The method of claim 7, wherein said base is an inorganic base selected from sodium hydroxide, lithium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, lithium carbonate; said hydrolyzing being optionally conducted in the presence of a solvent selected from a mixed solvent of tetrahydrofuran and methanol, a mixture of alcohols solvent, or chloroform, dichloromethane, or benzene.

9. A method of treating a person with type II diabetes comprising administering a compound of claim 1 to said person.